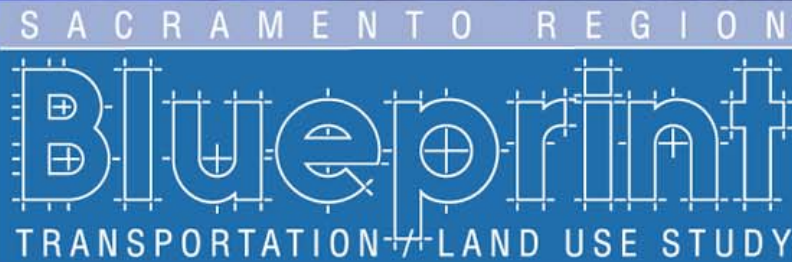


Caltrans Blueprint Workshop



Tools for Blueprint Planning
August 2, 2005



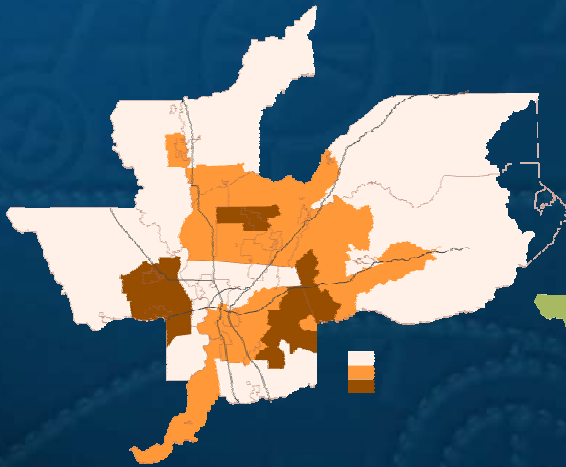
One Set of Tools, Two Applications



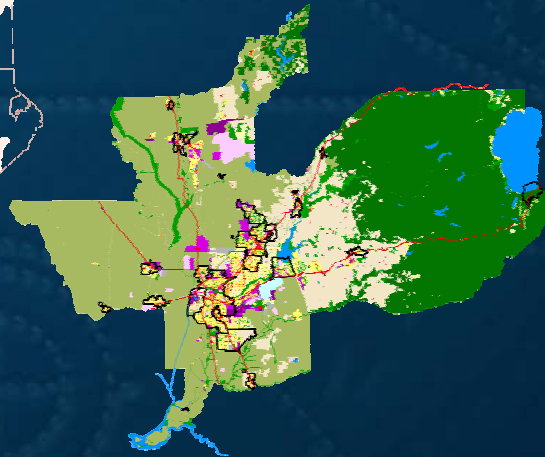
- Public Workshops to evaluate and refine scenarios
- Scenario Building to establish alternatives

Develop Better Information and Tools for Decision Making

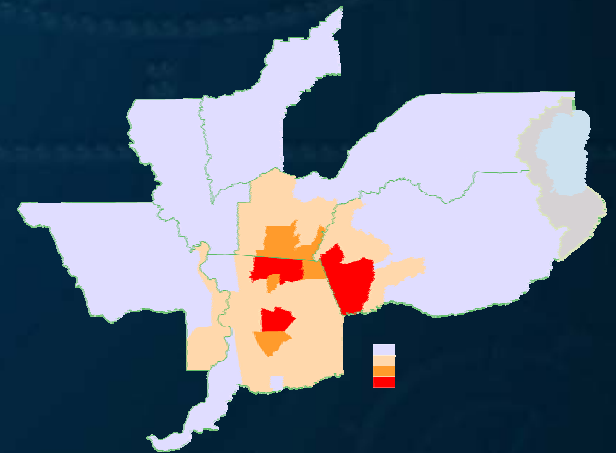
SACRAMENTO REGION
Blueprint
TRANSPORTATION LAND USE STUDY



**MEPLAN - Land
Economics**



**PLACE³S - Land
Use/Transportation
Impacts**



**SACMET & 4Ds -
Transportation**

Three levels of Workshops



- 33 neighborhood-scale workshops
- 7 county-scale workshops
- 1 regional-scale forum

Neighborhood-scale Workshops



- “Test drive” smart growth concepts
- Two 100-200 acre study areas at each workshop
 - One infill/redevelopment study area
 - One greenfield study area
- Real-time performance indicators
 - Laptop computers
 - Cell phone hook-up
 - Public domain software

The Yuba City Infill Site

SACRAMENTO REGION
Blueprint
TRANSPORTATION / LAND USE STUDY



PLACE³S GIS Planning Tool



- **PL**Anning for **C**ommunity **E**nergy, **E**conomic and **E**nvironmental **S**ustainability
- Evolved from neighborhood applications by adding county/regional functionality
- Platform change from ArcView to web-based (I-PLACE³S)

LAND USE MENU

Land Use Types

SACRAMENTO REGION

PRINT
ION LAND USE STUDY

| RESIDENTIAL BUILDING TYPES | | | | | | | |
|----------------------------|--------------------------------------|---|---|----|-----|----|--|
| 1 | Rural Residential |  |  | 2 | 1 | -- | Rural residential includes very large lot residential (1 acre per lot). |
| 2 | Large Lot Single Family Residential |  |  | 1 | 4 | -- | Arden Park has mainly large lots in the 1/2 to 1/3 acre size. Gardenland (South Natomas) has grid-streets with 1 acre lots and small houses. |
| 3 | Medium Lot Single Family Residential |  |  | 2 | 6 | -- | Standard single family lot of 52x100 min. Allows cul-de-sacs or grid pattern, w/cul-de-sac subdivisions at low end of range. Curtis Park at high end of range. |
| 4 | Small Lot Single Family Residential |  |  | 2 | 12 | -- | Small lot subdivisions: Villa Palazzo in Pocket (3,500 sqft lots), standard lots in Laguna West and some low density suburban garden apartments. |
| 5(O) | Townhouse (Owner) |  |  | 3 | 15 | -- | Metro Square in midtown is detached townhouse project at approx. 20 DU/ac. Most standard 2-story apts w/ surface parking are in this range. |
| 5(R) | Townhouse (Rental) | | | | | | |
| 6(O) | Low-Rise Condos (Owner) |  |  | 2 | 24 | -- | 2+ story attached units with structured parking (e.g., tuck-under). |
| 6(R) | Low-Rise Apartments (Rental) | | | | | | |
| 7(O) | Mid-Rise Condos (Owner) |  |  | 3 | 35 | -- | 3 story mid-level development. Less space dedicated to landscaping; more frontage on street. |
| 7(R) | Mid-Rise Apartments (Rental) | | | | | | |
| 8(O) | High-Rise Condos (Owner) |  |  | 6 | 66 | -- | 6 story development with structured parking. Buildings include elevators, interior courtyards, and hallways. |
| 8(R) | High-Rise Apartments (Rental) | | | | | | |
| 9(O) | Urban Condos (Owner) |  |  | 10 | 105 | -- | 10 story urban development. Buildings may include a health facility, door man, etc. |
| 9(R) | Urban Apartments (Rental) | | | | | | |

Stickers

LAND USE CHIP SET

1

| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5(O) | 5(O) | 5(O) | 5(O) | 5(O) | 5(O) | 5(O) | 5(O) | 5(O) | 5(O) | 5(O) | 5(O) |
| 5(R) | 5(R) | 5(R) | 5(R) | 5(R) | 5(R) | 5(R) | 5(R) | 5(R) | 5(R) | 5(R) | 5(R) |
| 6(O) | 6(O) | 6(O) | 6(O) | 6(O) | 6(O) | 6(O) | 6(O) | 6(O) | 6(O) | 6(O) | 6(O) |
| 6(R) | 6(R) | 6(R) | 6(R) | 6(R) | 6(R) | 6(R) | 6(R) | 6(R) | 6(R) | 6(R) | 6(R) |
| 7(O) | 7(O) | 7(O) | 7(O) | 7(O) | 7(O) | 7(O) | 7(O) | 7(O) | 7(O) | 7(O) | 7(O) |
| 7(R) | 7(R) | 7(R) | 7(R) | 7(R) | 7(R) | 7(R) | 7(R) | 7(R) | 7(R) | 7(R) | 7(R) |
| 8(O) | 8(O) | 8(O) | 8(O) | 8(O) | 8(O) | 8(O) | 8(O) | 8(O) | 8(O) | 8(O) | 8(O) |
| 8(R) | 8(R) | 8(R) | 8(R) | 8(R) | 8(R) | 8(R) | 8(R) | 8(R) | 8(R) | 8(R) | 8(R) |
| 9(O) | 9(O) | 9(O) | 9(O) | 9(O) | 9(O) | 9(O) | 9(O) | 9(O) | 9(O) | 9(O) | 9(O) |
| 9(R) | 9(R) | 9(R) | 9(R) | 9(R) | 9(R) | 9(R) | 9(R) | 9(R) | 9(R) | 9(R) | 9(R) |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |

LAND USE CHIP SET

2

| | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 14(O) | 14(O) | 14(O) | 14(O) | 14(O) | 14(O) | 14(O) | 14(O) | 14(O) | 14(O) | 14(O) | 14(O) |
| 15(O) | 15(O) | 15(O) | 15(O) | 15(O) | 15(O) | 15(O) | 15(O) | 15(O) | 15(O) | 15(O) | 15(O) |
| 15(R) | 15(R) | 15(R) | 15(R) | 15(R) | 15(R) | 15(R) | 15(R) | 15(R) | 15(R) | 15(R) | 15(R) |
| 16(O) | 16(O) | 16(O) | 16(O) | 16(O) | 16(O) | 16(O) | 16(O) | 16(O) | 16(O) | 16(O) | 16(O) |
| 16(R) | 16(R) | 16(R) | 16(R) | 16(R) | 16(R) | 16(R) | 16(R) | 16(R) | 16(R) | 16(R) | 16(R) |
| 17(O) | 17(O) | 17(O) | 17(O) | 17(O) | 17(O) | 17(O) | 17(O) | 17(O) | 17(O) | 17(O) | 17(O) |
| 17(R) | 17(R) | 17(R) | 17(R) | 17(R) | 17(R) | 17(R) | 17(R) | 17(R) | 17(R) | 17(R) | 17(R) |
| 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 |

WORKSHOPS

SACRAMENTO REGION



Indicators

PLACE³S

CURRENT PROJECT
RANCHO CORDOVA ZINFANDEL

PROJECT TYPE
NEIGHBORHOOD

LEAD ORGANIZATION
SACOG

STUDY AREA
CUSTOM STUDY SHAPEFILE

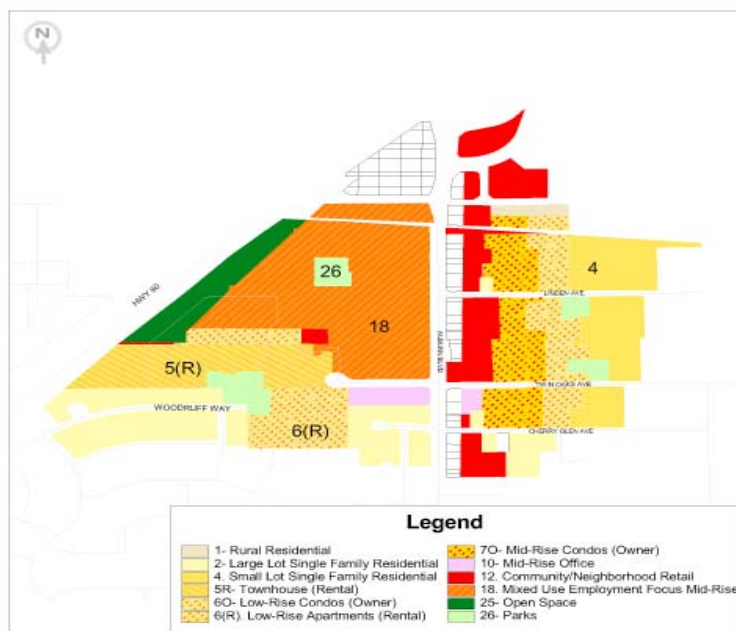
CURRENT SCENARIO : BASE CASE

SCENARIO COMPARISON

| SCENARIO NAME | TOTAL EMPLOYEES | TOTAL RESIDENTS | EMPLOYEES | | TOTAL DWELLING UNITS | DWELLING UNITS PER ACRE | RETAIL JOBS | OFFICE JOBS | INDUSTRIAL JOBS | PUBLIC JOBS |
|------------------|--------------------|--------------------|-------------------------|----------|----------------------------|-------------------------------|----------------|----------------|--------------------|----------------|
| | | | PER DWELLING UNIT | DWELLING | | | | | | |
| BASE CASE | 2,566 | 0 | 0.00 | 0 | 0.00 | 2,470 | 0 | 0 | 0 | 96 |
| TABLE 1 SG | 1,779 | 2,177 | 1.52 | 1,168 | 41.05 | 1,209 | 426 | 0 | 0 | 144 |
| TABLE 2 SG | 3,189 | 814 | 8.59 | 371 | 26.04 | 1,677 | 1,363 | 0 | 0 | 149 |
| TABLE 3 SG | 1,989 | 1,052 | 3.40 | 584 | 34.53 | 1,037 | 781 | 0 | 0 | 171 |
| TABLE 4 SG | 1,430 | 863 | 2.98 | 479 | 27.61 | 1,057 | 277 | 0 | 0 | 96 |

TABLE 6

Auburn Boulevard — Alternative Scenario



Legend

- 1- Rural Residential
- 2- Large Lot Single Family Residential
- 4- Small Lot Single Family Residential
- 5R- Townhouse (Rental)
- 60- Low-Rise Condos (Owner)
- 6(R)- Low-Rise Apartments (Rental)
- 70- Mid-Rise Condos (Owner)
- 10- Mid-Rise Office
- 12- Community/Neighborhood Retail
- 18- Mixed Use Employment Focus Mid-Rise
- 25- Open Space
- 26- Parks

Key Elements of Planning Scenario

- Light rail stop, park and ride lot, and transit hub at north end
- Widened Auburn
- Mixed use employment focus mid-rise community built around large park

PLACE'S Indicators

| | |
|--|-------|
| Total Employees | 1,581 |
| Total Dwelling Units | 2,257 |
| Total Residents | 1,091 |
| Employees/Dwelling Unit | 1.45 |
| Retail Jobs | 873 |
| Office Jobs | 707 |
| Industrial Jobs | 0 |
| Public Jobs | 0 |
| Pedestrian Friendliness | |
| (5 = exceptionally good) | 3.21 |
| Total Peak Hour Trips | 655 |
| Vehicle Miles Traveled (energy | |
| use and air emissions)/Capita | |
| Change (from current conditions) | -41% |
| Vehicle Trips/Capita Change | |
| (from current conditions) | -16% |

Key Land Uses Featured



4 Small-lot Single Family Residential



26 Parks



18 Mixed-use Employment Focus High-rise



6(R) Low-rise Apartments (rental)



5(R) Townhouse (rental)

3000 S Street,
Suite 300
Sacramento, CA
95816

tel 916.457.2264
fax 916.457.3299
ttd 916.737.1718
www.sacog.org

Partnership for Scenario Building



- Cities and counties
- Transit and Air Quality agencies
- Environmental groups
- Major land developers and home builders
- Social equity groups

Model Linkages in 2050 Scenarios



- Regional economic & demographic forecast
- MEPLAN produced district level results (Base Case)
- I-PLACE³S allocation to parcels
- Aggregate to TAZs for SACMET travel model
- 4Ds post-processor to modify vehicle trips, vehicle miles traveled, mode shares

Building Scenarios

- Scenario Parameters
- Allocating Growth

Sacramento County Performance Indicators

Land Use Density (by County Node)

Sacramento Blueprint

Draft Sep 29, 2003

| Dwelling Units per Acre | | | | |
|-------------------------------------|--------|--------|--------|--------|
| Scenario | Node 1 | Node 2 | Node 3 | Node 4 |
| Existing Conditions | 7.38 | 9.19 | 6.64 | 4.84 |
| <i>Land Use Balance - 65% NEW</i> | | | | |
| Land Use Balance - 65% TOTAL | 8.81 | 12.68 | 6.98 | 4.84 |
| <i>Sac Centers</i> | | | | |
| Sac Centers | 9.33 | 12.49 | 7.55 | 4.8 |
| <i>Sac Centers/Land Use Balance</i> | | | | |
| Sac Centers/Land Use Balance | 9.47 | 12.83 | 7.83 | 4.84 |

| Jobs per Acre | | | | |
|-------------------------------------|--------|--------|--------|--------|
| Scenario | Node 1 | Node 2 | Node 3 | Node 4 |
| Existing Conditions | 17 | 53.16 | 16.19 | 13.54 |
| <i>Land Use Balance - 65% NEW</i> | | | | |
| Land Use Balance - 65% TOTAL | 23.73 | 55.61 | 19.27 | 13.54 |
| <i>Sac Centers</i> | | | | |
| Sac Centers | 27.24 | 57.61 | 19.5 | 13.54 |
| <i>Sac Centers/Land Use Balance</i> | | | | |
| Sac Centers/Land Use Balance | 27.36 | 58.22 | 20.16 | 13.54 |

Sacramento County Performance Indicators

Land Use Consumption for Urban Areas (by County Node)

Draft APT 1, 2004

| Scenario | Total Dwelling Units | | | |
|-----------------------------------|----------------------|----------------|----------------|------------|
| | Node 1 | Node 2 | Node 3 | Node 4 |
| Existing Conditions | 39,039 | 46,183 | 69,885 | 63 |
| <i>Land Use Balance - 65% NEW</i> | 52,203 | 24,544 | 19,652 | 0 |
| Land Use Balance - 65% TOTAL | 91,242 | 70,727 | 89,537 | 63 |
| <i>Regional C - 3/16</i> | 61,845 | 49,516 | 26,579 | 9 |
| Regional C - 3/16 | 100,884 | 95,699 | 96,464 | 72 |
| <i>Regional C - 4/01</i> | 61,519 | 36,058 | 28,532 | 9 |
| Regional C - 4/01 | 100,558 | 82,241 | 98,417 | 72 |
| Scenario | Total Jobs | | | |
| | Node 1 | Node 2 | Node 3 | Node 4 |
| Existing Conditions | 56,998 | 162,179 | 72,491 | 118 |
| <i>Land Use Balance - 65% NEW</i> | 56,098 | 29,304 | 35,427 | 0 |
| Land Use Balance - 65% TOTAL | 113,096 | 191,483 | 107,918 | 118 |
| <i>Regional C - 3/16</i> | 72,668 | 57,153 | 38,438 | 0 |
| Regional C - 3/16 | 129,666 | 219,332 | 110,929 | 118 |
| <i>Regional C - 4/01</i> | 69,036 | 62,535 | 34,100 | 0 |
| Regional C - 4/01 | 126,034 | 224,714 | 106,591 | 118 |

SACMET Travel Demand Model



- 4-Step model with auto ownership
- Mode choice include walk/bike
- Pedestrian friendliness factor
- 4 time periods show congestion changes
- 1280 TAZs, 15,000 one-way road links

4Ds

Design, Diversity, Density, Destination

- Influence of land use on vehicle travel when used with a TAZ-based, 4-step travel model
- Early work by Cervero, Ewing, Walters in Atlanta
- Compares 2 alternatives which has positive and negative aspects



SACRAMENTO REGION

Blueprint

TRANSPORTATION / LAND USE STUDY